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18	UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA		
19	SAN FRANCISCO DIVISION		
20	REARDEN LLC et al.,	Case Nos.	3:17-cv-04006-JST
21	Plaintiffs,		3:17-cv-04191-JST
22	VS.		ATION OF JONATHAN
23	THE WALT DISNEY COMPANY et al.,	ROTHBART IN SUPPORT OF M FOR SUMMARY JUDGMENT O	MMARY JUDGMENT ON
24	Defendants, REARDEN LLC et al.,	CAUSAL	NEXUS ISSUE
25	Plaintiffs,	Judge:	Hon. Jon S. Tigar
26	vs.	Date:	To be set To be set
27	TWENTIETH CENTURY FOX FILM CORPORATION et al.,	Ctrm.:	9 (19th Floor)
	Defendants.	Cum	/ (17th 1 1001)
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I, Jonathan Rothbart, hereby declare:

- 1. I was the visual effects supervisor for the motion picture *Deadpool*. Except for those matters stated on information and belief, I have personal knowledge of the contents of this declaration. I am reliably informed of the matters stated on information and belief, and I believe such matters to be true. If called as a witness in this action, I could and would testify competently to the contents of this declaration.
- 2. I understand that Plaintiffs' claims in the above-captioned case relate to facial motion capture work in connection with the character "Colossus" in *Deadpool*.
- 3. I was an independent contractor hired to supervise visual effects for *Deadpool*. My responsibilities as visual effects supervisor included hiring and supervising vendors who performed visual effects work in connection with *Deadpool*. One of those vendors was Digital Domain 3.0, Inc. ("DD3").
- 4. The on-screen performance of Colossus is the result of the performances of numerous actors and a team of animators and other visual artists.
- 5. The facial component of Colossus was the amalgam of performances by multiple people and many visual and graphic effects. In order to create Colossus, we began by creating a baseline scan of performer Glenn Ennis. That scan was created by a vendor other than DD3 and was made using a technology other than MOVA Contour. The scan was then provided to DD3. I refer to the scan of Mr. Ennis as a "baseline" scan because, subsequent to the scan itself, facial sculptors remodeled and redesigned the scan of Mr. Ennis' face and head to create the head and face of Colossus.
- 6. The voice of Colossus was performed by a different actor, Stefan Kapic. Mr. Kapic's voice performance was also videotaped.
- 7. A third person, Greg LaSalle, performed facial movements that were captured by MOVA Contour. Mr. LaSalle watched the videotaped performance of Mr. Kapic and attempted to recreate Mr. Kapic's timing and delivery. The film's director, Tim Miller, directed both Mr. Kapic's performance and the performance of Mr. LaSalle. Mr. LaSalle would perform multiple takes of each line of Mr. Kapic's dialogue. Mr. Miller would then note which takes he preferred.

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- 8. DD3 delivered Quick-Time files of Mr. LaSalle's performance which showed a gray clay-like version of the facial performance. I reviewed these takes, along with videotape of Mr. LaSalle's performance, and, along with Mr. Miller, selected the best take for each line of dialogue. After those selections were made, the vendors, including DD3, retargeted Mr. LaSalle's performance in each take to the head and face of Colossus that had been created from Mr. Ennis' baseline facial scan.
- 9. After the process described above, there were numerous creative and technical steps taken to create the Colossus character's face, and the character as a whole. A fourth performer, TJ Storm, provided the body performance for Colossus. Mr. Storm's performance was captured by a vendor other than DD3 and using a technology other than MOVA Contour.
- 10. Animators then married the performance of the head of Colossus with the performance of the Colossus body. This combining process required numerous adjustments and creative decisions before we achieved a composite of Colossus as a whole.
- 11. The process I described above related to the way Colossus moves. A different process, which did not involve the use of MOVA Contour, was used for the way Colossus looks. Prior to any motion capture, visual artists created an initial still model of the character. I then provided creative feedback and the artists would revise the model to change, for example, the character's hair or eyes. I then reviewed the revised model and provided additional feedback. Once the model was close to what we wanted, Mr. Miller also provided creative feedback, resulting in additional revisions to the model. In total, we made hundreds of revisions to the look of the character before achieving the final appearance that is seen in *Deadpool*.
- 12. The live-action scenes in which Colossus would eventually appear were filmed separately. A fifth performer, Andre Tricoteaux, was the on-set stand in for Colossus.
- 13. Animators inserted the Colossus character into each shot in which the character appears. I reviewed the shots and provides creative feedback; the animators then revised the shots. For each shot in which Colossus appears, I reviewed approximately 50-100 different versions, or takes, of the shot. Mr. Miller also reviewed the various takes and provided his own feedback to the animators.

- In the next phase of the process, the shots in which Colossus appears were lit and rendered. Rendering is a time consuming and expensive process that places the 3D animated
- Because the rendering process is time consuming each shot is rendered in parts. Thus, for example, in a single shot of Colossus, multiple properties of the character and maps defining certain areas of his body might all be rendered separately.
- After the rendering, the individually rendered pieces are then combined into the final shot in a process called compositing. During this process, both Mr. Miller and I would provide creative feedback and a new version of the shot would be composited based on that feedback. Mr. Miller and I would then review the new version and provide additional feedback. We would continue this process until we achieved the Final Approved Shot, i.e. the shot that
- Hundreds of hours of visual effects artistry were required to create the final Colossus. The Colossus character appears in approximately 60 of the approximately 1,200 visual effects shots that constitute *Deadpool*. In total, Colossus appears onscreen in approximately 5

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct and that I executed this declaration this 22 day of February 2019 at San Francisco,

Jonathan Rothbart